Managing innovation processes through value co-creation: a process case from business-to-business service practise

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Published in:
International Journal of Innovation Management

Link to article, DOI:
10.1142/S1363919618500305

Publication date:
2018

Document Version
Peer reviewed version

MANAGING INNOVATION PROCESSES THROUGH VALUE CO-CREATION: A PROCESS CASE FROM BUSINESS-TO-BUSINESS SERVICE PRACTISE

Abstract

Value co-creation is a specific type of collaboration that is considered to be an innovative and interactive process between end users and organisations; it aims to increase the value of a product or service. This study investigates how a network of stakeholders collaborating to manage innovation openly co-creates value over time; it contributes to the existing literature on value co-creation by taking the perspective of the network as a whole. The study follows a case in which value co-creation unfolds over time across a network of stakeholders within the business-to-business facility service context. The in-depth longitudinal investigation of a network composed of a corporate customer and its external facility service providers revealed that a network of stakeholders co-creates value over time by 1) offering an adaptable structure for the network to organise innovation activities and establish support routines, 2) facilitating interactions to support stakeholder relation development and 3) allowing participants to achieve self-empowerment. Therefore, stakeholder value co-creation entails the combination of single value co-creation activities and overarching network progressions that allow for learning and inter-organisational trust among stakeholders.

Keywords: Stakeholder value co-creation, process studies, interaction, facility services

Introduction

Collaboration between stakeholders during innovation has both benefits and pitfalls, requiring specific organisational and managerial approaches, one of which is open innovation (Giannopoulou, Yström, & Ollila, 2011; Lazzarotti & Manzini, 2009), a distributed innovation process based on purposively managed knowledge flows across organizational boundaries' (Chesbrough & Bogers, 2014). Specifically, one of the main implications of innovation management when adopting an open innovation approach is value co-creation. Value co-creation is a specific type of collaboration considered to be an innovative and interactive process between end users and organisations that aims to increase the value of a product or service (Bogers, Afuah, & Bastian, 2010; Shanmugam & Durugbo, 2015). It refers to the totality of the value formation process, from the actions taken by the organisation to support value achievement for its stakeholders to the independent value-creating activities of the end users to the joint collaborative processes among the organisation and other stakeholders. What differentiates value co-creation from other implications of open innovation management is that all of the stakeholders typically aim to ensure that each party benefits from the relationship (Grönroos, 2012; Payne, Storbacka, & Frow, 2007; Prahalad & Ramaswamy, 2004a). In this view, value is defined as the benefit associated with a change in the current states of the involved parties. Such benefit is subjective and contextual, as each party perceives every change differently (Sandström, Edvardsson, Kristensson, & Magnusson, 2008; Vargo & Lusch, 2007).

Scholars have investigated processes that are commonly associated with managing value co-creation (Baumann & Le Meunier-FitzHugh, 2014; Fyrberg Yngfalk, 2013; Giannopoulou et al., 2011; Grönroos, 2011, 2012; Lambert & Enz, 2012; Payne et al., 2007) and related capabilities (Kazadi, Lievens, & Mahr, 2015; e.g. Korkman, Storbacka, & Harald, 2010; Lenka, Parida, & Wincent, 2017; Saarijärvi, 2012; Sawhney, Verona, & Prandelli, 2005; Shanmugam & Durugbo, 2015). Overall, these studies argue that end users benefit from value co-creation, as it involves them in innovation processes, thereby allowing them to customise products and services and improve their status quo. To support such involvement, existing research highlights how common innovation processes and related relationships are organised and managed (e.g. Lazzarotti & Manzini, 2009; Payne et al., 2007).

The majority of the research done on value co-creation emphasises the dual relationship between organisation and end users, adopting the perspective of either one as opposed to adopting the perspective of the stakeholder network as a whole. Yet, in practice, organisations increasingly engage in open innovation projects within networks of stakeholders that include end users, suppliers and other partners (Kazadi et al., 2015). Value co-creation happens within networks, and it involves a variety of collaborative activities during which multiple interdependent external stakeholders contribute to an organisation's innovation process (Gebauer, Fueller, & Pezzei, 2013; Giannopoulou et al., 2011; Lazzarotti & Manzini, 2009; Mahr, Lievens, & Blazevic, 2014). While value co-creation within a network can be beneficial for all its members, bringing together a diverse group of stakeholders leads to potential divergent goals and interests, communication difficulties, distrust among stakeholders and conflicts over value appropriation (Chowdhury, Gruber, & Zolkiewski, 2016; Waligo, Clarke, & Hawkins, 2014). Stakeholder co-creation capabilities such as networking, competence mapping, relationship management capabilities and knowledge management capabilities may allow an individual firm to reap the benefits from stakeholder co-creation better than other parties, thereby driving its competitive advantage and dynamic capability generation (Kazadi et al., 2015; Preikschas, Cabanelas, Rüdiger, & Lampón, 2017). This approach unveils the potential role that individual stakeholders may adopt when involved in value co-creation within a network; however, it does not consider the perspective of the network as a whole, which would add to the knowledge on how the talents of differing stakeholders are harnessed to meet shared goals (Stanko, Fisher, & Bogers, 2017).

Against this background, this paper addresses the dynamics and enablers of stakeholder value co-creation from the network perspective within the context of open innovation management in business-to-business support

services. It investigates *how a network of stakeholders collaborating to openly manage innovation co-creates value over time*. This work contributes to the knowledge on stakeholder involvement strategies and open innovation through value co-creation in business-to-business support services because it takes the perspective of the network as a whole instead of that of one specific stakeholder (Bogers et al., 2017; Remneland Wikhamn & Wikhamn, 2013; Stanko et al., 2017; Waligo et al., 2014). This paper uses a case study in which value co-creation unfolds over time across a network of stakeholders (a corporate customer and its facility service providers) through the establishment, management and development of an innovation platform. Data were collected from 2011 to 2015 in the form of participant observation, in-depth interviews and archive data collection of company records (Drori & Honig, 2013; Langley & Truax, 1994).

The remainder of the paper is organised as follows: 1) the theoretical background for the study is outlined and the research methods are described, 2) the findings are analysed, 3) the results are discussed in relation to the existing literature and 4) conclusions are drawn and suggestions for further research are provided.

Theoretical background

Organisations increasingly rely on external sources throughout their innovation processes – ideas, resources and individuals flow in and out of organisations as the boundaries of the firm become more permeable (Chesbrough, 2003; West & Bogers, 2011; West, Salter, Vanhaverbeke, & Chesbrough, 2014). Organisations manage open innovation through dual relationships between innovators and end users (Chesbrough & Appleyard, 2007; Spohrer & Maglio, 2008) as well as through stakeholder interactions within communities and networks (den Hertog, 2000; Kazadi et al., 2015). All of these relationships are potentially beneficial, as they allow for value co-creation (Bueno & Balestrin, 2012; Giannopoulou et al., 2011; Lazzarotti & Manzini, 2009; Preikschas et al., 2017). The concept of value co-creation extends the established notion that value is created on the supply side by mobilising the innovator's assets and resources. Social, cultural and cognitive dimensions lay behind the interaction between supply and demand; therefore, value co-creation processes do not only happen on the market, but also at the cognitive and socio-cultural levels of innovator–end user encounters (Dominici, Yolles, & Caputo, 2017). This conceptualisation of value co-creation outlines that competitive advantage comes from personalised end user experiences facilitated by the innovator alone or in collaboration with other actors such as manufacturers, service providers and other stakeholders (Bogers et al., 2010; Prahalad & Ramaswamy, 2004a; Vargo & Lusch, 2004).

Besides the extensive work on conceptualising value and value co-creation (Grönroos, 2012; Grönroos & Voima, 2013; Maglio & Spohrer, 2007; Spohrer & Maglio, 2008; Vargo & Lusch, 2004, 2007), scholars have examined the processes and capabilities associated with value co-creation. Value co-creation processes have been described as a joint act of direct interaction in which service-providing organisations produce and provide resources to their clients, who in turn combine them with other available resources during a use or consumption process in both business-to-consumer contexts (Baumann & Le Meunier-FitzHugh, 2014; Prahalad & Ramaswamy, 2004a, 2004b) and business-to-business contexts (Lambert & Enz, 2012). Existing literature stresses that the engagement of individual actors over time is one of the micro-foundations of value co-creation processes (Storbacka, Brodie, Böhmann, Maglio, & Nenonen, 2016), and that network orchestrators play a crucial role in building such grounds. They do so primarily by acting as leaders and strategists while guiding the interactions aimed at value co-creation (Nilsen & Gausdal, 2017), for instance, by actively involving the frontline employees of service providers in innovation processes (Engelen, Weinekötter, Saeed, & Enke, 2017; Santos-Vijande, López-Sánchez, & Rudd, 2016). Furthermore, differences among participants' needs and interests are fundamental for value to be co-created since they stimulate new interpretations and meaning creations (Fyrberg Yngfalk, 2013).

Payne et al. (2007) use a process-based framework to outline how managing value co-creation lies in the relationship between innovators and end users. Similarly, Lambert and Enz (2012) propose that value co-creation occurs during three cyclical and interrelated phases through which end users and suppliers interact: 1) jointly crafting value propositions, 2) value actualisation and 3) value determination. Throughout such processes, not only must there be a large number of conversations that take place over time, but they must also involve the exchange of rich and relevant information (Wong, Peko, Sundaram, & Piramuthu, 2016). Through the study of an online platform, Lenka et al. (2017) find that digitalisation capabilities, necessary to build such infrastructure, enhance interactions and might lead to value co-creation in combination with the perceptive and responsive mechanisms of the providers and the end users, respectively.

More generally, developing relevant capabilities in an organisation depends on corporate strategy and customer value proposition at a specific point in time (Lombardo & Cabiddu, 2016; Payne et al., 2007). Among the capabilities associated with value co-creation, Saarijärvi (2012) points to the analytical capability to understand the customer value proposition and find value co-creation mechanisms that are appropriately balanced. Moreover, value co-creation appears to be supported by the assessment capability to evaluate the opportunities

of different value co-creation mechanisms in supporting the delivery of the customer value proposition and the involvement of the end users themselves (Saarijärvi, 2012). An organisation both supports and enhances value co-creation by providing resources and helping customers to integrate these resources with their own. In this process, organisations' role is to provide resources that fit into the daily practises of their customers, which is achieved by developing dedicated capabilities for dealing with the dynamics of the markets in which they operate. Furthermore, organisations aiming to enhance value co-creation combine their focus on economic exchanges with pinpointing customers' daily practises that might characterise their current and future consumption (Korkman et al., 2010). Seen from a dyadic perspective, mutual commitment, common goals, dialogue and shared interests are crucial elements for achieving value co-creation, highlighting the role of relational capabilities (Baumann & Le Meunier-FitzHugh, 2014; Kohtamäki & Partanen, 2016). Within this context, relational capabilities refer to an organisation's ability to manage stakeholders outside the organisation. This includes interaction activities, such as end user involvement in the product and service development process, as well as working together with suppliers to develop an appropriate infrastructure for the organisation (Hsieh & Hsieh, 2015; Kim, Song, & Triche, 2015; Park & Lee, 2015). In contrast, value co-creation promotes the generation of dynamic capabilities linked to adaptability, knowledge, innovation and relationship management on the supplier side (Preikschas et al., 2017). More specifically, value co-creation processes may result in two distinct types of value, both of which are grounded in the nature of the dyadic relation between supply and demand: episode value and relationship value. Episode value is associated with those benefits appreciated by all parties irrespective of whether they are committed to value co-creation on a one-time transaction basis or via a long-term relationship. Relationship value implies a deeper meaning of safety, security and credibility (i.e. trust) (Baumann & Le Meunier-FitzHugh, 2014).

Stakeholder value co-creation and the perspective of the network

Despite the increasing interest in value co-creation that extends beyond the dyadic relationship between innovators and end users, existing literature is mainly concerned with unveiling the role that individual stakeholders may adopt when involved in value co-creation within a network. Previous studies do not consider the perspective of the network as a whole – an approach that would contribute to our understanding of stakeholder involvement strategies and open innovation through value co-creation (Bogers et al., 2017; Remneland Wikhamn & Wikhamn, 2013; Waligo et al., 2014). In contrast, this study builds on existing work on

value co-creation between innovators and end users as well as within a network, to which it contributes by adopting the perspective of the network as a whole. It conceptualises value as value-in-use, created by the receiver individually and socially during the usage of resources and processes that are facilitated by provider(s) (Grönroos & Voima, 2013). Value co-creation processes are conceptualised as the longitudinal, dynamic and interactive set of experiences and activities that comprise the combination of co-creation opportunity discovery, planning and implementation on the provider side and emotion, cognition and behaviour on the receiver side. Such encounter processes are partly overt and deliberate and partly based on routine and unconscious behaviour (Payne et al., 2007). To adopt the perspective of the network as a whole, here, the network becomes the provider that facilitates resources and processes in order to create value (Grönroos & Voima, 2012). In turn, the individual stakeholders within the network are receivers of the value. Stakeholder value co-creation is therefore the set of processes through which the network facilitates the creation of value-in-use for each individual stakeholder and for the network as a whole (Grönroos & Voima, 2013).

Within this perspective, open innovation and value co-creation processes within a network of stakeholders intertwine a variety of encounter processes between providers and receivers. Fu, Wang and Zhao (2017), for example, find that within a platform that connects diverse stakeholders aiming for open service innovation, value co-creation does not happen right away – rather, it emerges during the expansion of the platform when it is used by the network owner to stimulate stakeholder interaction (Fu et al., 2017). In this context, service innovation starts, in the emergent phase, with building the support infrastructure. During the expansion phase, the focus is on building relationships among stakeholders. Finally, in its maturity, the network owner guides the building of the environment for the platform ecosystem; hence, the network owner assumes the role of network facilitator to lead value co-creation across the platform development (Fu et al., 2017). Collaboration platforms such as the one investigated by Fu et al. (2017) appear to allow for value co-creation when at least one actor within the network possesses certain characteristics, capabilities and enablers. Mačiuliene and Skaržauskiene (2016) identify the following as necessary for value co-creation among diverse stakeholders: 1) capacity for creativity, 2) capacity for aggregating knowledge and 3) capacity for decision. Pera et al. (2016) stress the importance of innovative resource integration practices and individual leadership characteristics. Stakeholder interaction aimed at value co-creation depends on the leadership quality and stakeholder involvement capacity of the network leader, be it the owner or another party (Waligo et al., 2014). Similar to dyadic relations between innovators and end users, relational capabilities appear as a crucial antecedent of value co-creation in a network,

especially when paired with enablers such as trust, inclusiveness and openness (Carroll & Helfert, 2015; Kohtamäki, Partanen, & Möller, 2013; Murthy, Padhi, Gupta, & Kapil, 2016; Pera et al., 2016). Relational capabilities play a significant role in enabling organisations to engage in open dialogue with their end users and to develop close relationships with the other stakeholders in the network (Mostafa, 2016; Ramaswamy & Ozcan, 2016), even in asymmetrical relationships in which partners have different sizes and characterisations (Ngugi, Johnsen, & Erdélyi, 2010; Pérez & Cambra-Fierro, 2015). However, this requires reflection and acting upon relationships between stakeholders, as trust and commitment in stakeholder relations are filtered through monitoring mechanisms that in turn depend on continuity expectations, information exchange, asset specificity and behavioural uncertainty (Talay & Akdeniz, 2014). Furthermore, inter-organisational trust evolves alongside the development of stakeholder relations, which follows four main phases: 1) initiation, 2) negotiation, 3) formation and 4) operation. Eventually, stakeholder relations transform into a collective, organisational-level property that is independent of the individual actors involved through the processes of objectification and routinisation embedded in the organisational context (Schilke & Cook, 2013).

Research setting and methods

To investigate *how a network of stakeholders collaborating to openly manage innovation co-creates value over time*, this paper draws from the process case study of a network within the context of facilities services. Specifically, it follows the establishment, management and development of Essent Facility Services' (EFS) innovation platform. EFS' platform is used by the network of stakeholders of one specific corporate service customer, Essent (the largest energy provider in the Netherlands), to organise its relations with the facility service providers over time. The platform was constructed to support interactions and drive collaborative innovation between the supply and demand of facility service provision for Essent. Despite its name, EFS' platform is not just a virtual meeting place for a variety of actors – it consists of a two-layered formal structure (strategic and operational) and the combination of planned face-to-face activities, such as quarterly and monthly meetings, and spontaneous virtual interactions in a dedicated online network (Yammer). This study thus considers EFS' platform as the manifestation of the stakeholder network under investigation, and it follows its development from its conception in 2011 through its state as of 2015.

In this paper, the facilities service context delineates the scope of the investigation, while dynamic value co-creation constitutes the object of the research. This study uses process methods to identify the generative

mechanisms that cause observed events to happen in the real world given the contingencies or circumstances of the case of EFS' platform (Langley, 1999; Langley, Smallman, Tsoukas, & Van de Ven, 2013; Pettigrew, 1997; Van de Ven & Poole, 2005). Specifically, this study is built upon two interpretations of processes: 1) as a category of concepts of organisational actions (e.g. communication, work flows, decision making) and 2) as the progression (i.e. order and sequence) of events in the existence of an organisational entity over time (Van de Ven, 1992; Van de Ven & Poole, 1995). The case of EFS' platform includes a set of evolving and well-documented phenomena consisting of a combination of planned and emergent innovation processes within the frame of the evolution of the platform itself. Therefore, the first interpretation of process is applied when referring to the single innovation activities of the platform. Each of these activities is analysed through the conceptual framework proposed by Payne et al. (2007) on managing the co-creation of value to outline dynamics and enablers of value co-creation processes in the investigated case. The second interpretation of process is used to understand the progression of events in the establishment, management and development of EFS' platform. Throughout this progression, the emergence and intertwining of dynamics and enablers of single innovation activities within the stakeholder network is examined over the emergence, expansion and maturity phases of EFS' platform (Fu et al., 2017) as well as across the development of inter-organisational stakeholder relations (Schilke & Cook, 2013). An in-depth longitudinal case study is carried out to uncover the dynamics behind value co-creation beyond predetermined *ad hoc* processes and to theorise about their underlying causal mechanisms by incorporating both aspects of the processes (Dieleman & Boddewyn, 2011).

The facility service context and EFS' innovation platform

This study adopts the perspective of a specific network of stakeholders in order to answer the research question through the in-depth longitudinal case study of the network involved in EFS' innovation platform. Since its first ideation, the platform was meant to actively connect the stakeholders of the facility service provision carried out at Essent, a Dutch energy company, with the explicit aim of driving collaborative innovation. It is worth noting that despite its name, EFS' platform is not only constituted by a tangible venue for interactions – the online network Yammer – but also, and most importantly, includes a formal structure and a schedule of regular face-to-face activities. Therefore, the platform represents a purposefully created organisation aimed at supporting interactions and collaborative innovation across EFS' network of stakeholders.

According to European Standards (ENs), facility services integrate processes within an organisation to maintain and develop said services, which supports and improves the effectiveness of the organisation's primary activities (CEN, 2006). In other words, facility services enable employees to carry out the activities related to the core business without having to worry about technical maintenance, cleaning, catering, space management, etc. To ensure that such a varied set of services is taken care of, each organisation requires a more or less formalised unit that oversees facility service provision, freeing its employees to carry out their core tasks. In addition, facility services might involve outsourced service providers and managing agents. While the former takes care of the operational and daily provision of the services, the latter is an external intermediary in charge of managing contracts with the outsourced provider(s) (which support the internal facility service unit) (Alexander, 1996; Coenen, Alexander, & Kok, 2013; Jensen, 2008).

The internal facility service unit is responsible for facility service provision for its own organisation, and when facility services are outsourced, it manages the relationships and outsourcing contracts with the external facility service provider(s) (Coenen et al., 2013). In the case of Essent, the internal facility management unit is the above-mentioned EFS. Within Essent's organisational structure, EFS is a formal department that belongs to the finance business unit and reports to the director of services and the Chief Financial Officer (CFO). EFS is comprised of one team manager, three supply and demand managers (two of which are responsible for contract management with the managing agent and one for innovation and supply management), one junior supply and demand manager and one project manager.

Data collection and analysis

As part of the case study, longitudinal data were collected through participant observation, in-depth interviews and archive data collection (Drori & Honig, 2013; Hadjimanolis, 2006; Langley & Truax, 1994; Nilsen & Gausdal, 2017) over a period of four years, from the ideation of EFS' platform in 2011 to the beginning of 2015. This timeframe made it possible to collect a very rich database because Author 2 was working for EFS and was responsible for developing and implementing the platform. The database was therefore built in cooperation with Author 1, who was not affiliated with EFS, and Author 2, who played an active role in the ideation and management of the platform. It comprises 324 files, including audio and video recordings of in-depth and short interviews; presentations from various participants in the platform; plans, reports and meeting minutes; popular articles; pictures and selected email communication.

As researchers, both authors carried out various types of fieldwork (e.g. participant observation, interviews and archive data collection), which influenced the development of the mutual learning and ongoing reciprocity relationships between the researchers and informants. This offered remarkable academic insights into the processes of value co-creation within EFS' platform and allowed the authors to tap into people's knowledge and interpretations of the network (Coghlan, 2001, 2003; Drori & Honig, 2013). Author 2 facilitated the collection of empirical material indiscriminately *in situ*, which requires close proximity to the observed phenomena and the ability to gain an insider's perspective (Coghlan, 2001, 2003; Drori & Honig, 2013). In addition, it allowed Author 2 to identify a set of key informants within the network of stakeholders (Balogun, 2005). This group was interviewed by Author 1 and by external collaborators to reduce the risk of bias. For this reason, Author 1 took a more detached and critical view of the data, which were analysed independently of Author 2 (Drori & Honig, 2013). Archive data were collected on a daily basis by Author 2 and independently organised in a chronological database by Author 1. In addition, the virtual network Yammer, which EFS' platform used to support interactions in an online setting, was used to monitor the virtual exchanges between participants and to extract archive material on the offline activities. The archive data also included a collection of short interviews with several key players in the stakeholder network (carried out by external collaborators not associated with this study).

Author 1 carried out seven in-depth interviews to gain a detached perspective on the development of the relationships among stakeholders over time as well as on the actual use of the platform thus far. The in-depth interviews took place in December 2014 with seven representatives of the different stakeholders involved in EFS' platform. Author 1 also participated in one of EFS' platform meetings on 3 December 2014, the resulting report of which is included in the overall database. The in-depth interviews, the observation report and the archive data were analysed by Author 1 and then discussed with Author 2 throughout the data analysis. In fact, Author 2 served as data collector only up until the moment he left the platform – at which point he joined Author 1 in discussing the data analysis, enriching it with the achieved insider's insights (Drori & Honig, 2013).

The critical incident technique was applied to the data collection and analysis in order to incorporate the transaction view of time, which is typical of process studies (Flanagan, 1954; Wright, Manning, Farmer, & Gilbreath, 2000). Based on this approach, time was considered as dependent on its observer(s) (in this study, Author 2 and all of the interviewees), who determine critical events based on what they deem to be significant. Time was measured by identifying events that were critical or significant to the subjects involved in the

processes under investigation (Van de Ven & Poole, 2005). Such events included planned and emergent value co-creation activities as well as any other occurrence that observers identified as critical in the unfolding of the process behind the development of EFS' platform. Four elements of these critical events were considered, discussed with key respondents and documented; they included time, description, cause and results (Ahola, 2009; Nardelli, 2017). Given the subjective conceptualisation of value adopted for the study, critical events were associated with value co-creation activities based on the evaluation of the interviewees themselves. On the one hand, value was operationalised as a positive change in the status quo of each stakeholder, be it in the form of monetary gains or enhanced cooperation, that results in synergies between different facility services and shared cost reduction. On the other hand, improvement and innovation processes were not associated with value co-creation based on an objective evaluation of tangible outcomes, but rather on whether the interviewees perceived them as value adding (Grönroos & Voima, 2013). Critical events were then mapped on a timeline and analysed with the support of archive data and through the lens of three key process models (Fu et al., 2017; Payne et al., 2007; Schilke & Cook, 2013) to understand how they were embedded in the development of the platform (Butterfield, Borgen, Amundson, & Erlebach, 2010; Gremler & Gwinner, 2008; McKague, Zietsma, & Oliver, 2015). The data analysis was carried out with a structured approach to visual mapping (inspired by Balogun, 2005). This approach aimed to uncover the process aspects of EFS' platform (i.e. to track and understand its development) (Eisenhardt, 1989; Langley, 1999; Langley et al., 2013). The qualitative data analysis software ATLAS.ti was used to build and store the database and to support the data analysis. Visual mapping was used to track the development of the stakeholder network and the related capabilities for value co-creation management on the timeline in Figures 1a, 1b and 1c.

Insert Figures 1a, 1b and 1c about here

Overall, the study aimed at versatility rather than statistical generalisability (Lee & Baskerville, 2003; Poole, Van de Ven, Dooley, & Holmes, 2000). In fact, the results were extracted through a combination of critical incident technique (Gremler, 2004) and theoretical sampling (Eisenhardt, 1989). This, along with the systematic and transparent approach to data collection and analysis, supports the applicability of results beyond the investigated case and is within the boundaries of the facilities service sector (Lee & Baskerville, 2003). Furthermore, dedicated strategies were applied to strengthen the validity of the study. The collaboration between Author 1 and Author 2, the latter being directly involved with the phenomena under investigation, allowed for

work with interactional expertise, supporting interpretative validity through a closer understanding of practitioners' language and attitudes (Johnson, 1997; Langley, 1999). Finally, the collection and analysis of such an extensive and heterogeneous database supported triangulation, thereby strengthening the internal validity (Johnson, 1997; Miles & Huberman, 1994; Yin, 2009).

Analysis

Essent is the largest energy company in the Netherlands. With approximately 3,600 full-time employees, it provides private and corporate customers with gas, electricity and energy services. In 2011, EFS (i.e. the internal unit of Essent responsible for facility services) outsourced most of Essent facility service provision to one main managing agent, here fictitiously referred to as 'MA' to ensure anonymity. MA was placed in charge of managing contracts with six single providers of facility services; it shared the responsibility of strategic decision making associated with facility service provision, improvement and innovation with EFS. The service quality, continuity and costs of facility services were all agreed on by EFS with the correspondent managing agents based on contracts grounded in specific service-level agreements (SLAs). In addition, the managing agent designed individual contracts to help manage the relationships with the single service providers.

At this point, EFS had stakeholders characterised by heterogeneous needs and expectations (illustrated in Figure 2) as it is typical of internal facility service units (Coenen et al., 2013). On the demand side, EFS was responsible not only for the organisation's overall satisfaction in terms of facility service quality and budget, but also for fulfilling the individual needs and expectations of the final receivers of the facility services (i.e. the employees and guests of Essent facilities). On the supply side, the stakeholder network included the managing agent MA and the single facility service providers, who were responsible for cleaning, catering, security, hospitality, car leasing and building maintenance.

Insert Figure 2 about here

Emergence of EFS' innovation platform: Ideating through the identification of co-creation opportunities and initiation of stakeholder relations

EFS launched its platform in order to deal with the heterogeneity of its network of stakeholders more easily. The first sketch of the initiative was created in September 2011; it included several EFS stakeholders as well as some

representatives from the research world. Since its ideation, the aim of EFS' platform was to engage with the diverse set of actors in its stakeholder network in order to stimulate innovation and improvement ideas, manage their development and implementation and monitor their outcomes for future development. In other words, the main goals of the platform were 1) to stimulate cooperation within the facility service value chain, both on the operational as well as on the strategic level, and 2) to stimulate all parties involved to come up with innovations that increase the experience and satisfaction of Essent employees (i.e. the final recipients of the service provision).

Throughout the emergence of EFS' platform, the focus on the provider side was on designing co-creation and relationship experiences. The network as a whole worked on identifying value co-creation opportunities as led by the stakeholder at the core of the network, EFS. In fact, EFS guided the network toward establishing the platform as a locus for innovation and value co-creation, as opposed to maintaining unchanged traditional relationships between itself, the client and each individual provider, as the following quotes outline.

> "Let's see together how we can make the best for Essent. We all have our limitations, but by focusing on them we won't get anywhere. (…) The interaction model will make sure that we all give and take. That brings you the most because we are all looking for a longer, stable relationship." Manager of EFS to representatives of stakeholders on building up the platform, December 2012

> "We [Essent] as a whole organisation need to become more innovative and creative. Therefore we are working to get the correct skills in house. This includes the Essent facility chain. (…) The platform is designed based on an interaction-based model as opposed to the traditional transaction based model. In the latter, which we applied before, the focus was on the mono-directional relationship from supply to demand; now, we are emphasizing the overall interactions across the facility chain. (…) We can think of ideas in the facility chain, but if we don't cooperate to bring it to a good, shared result, then it will damage the overall outcome." EFS manager on the motivations behind the innovation platform, December 2014

The quotes illustrate how EFS started building up the platform on the assumptions that a shift was needed in the attitude towards the whole facility service chain. EFS acknowledged that, as recipients of facility service provision and innovation, they could create value but only if supported by providers with the same attitude. Therefore, EFS formalised their stakeholder network by establishing the EFS' platform as holistic provider in charge of recognising and acting upon opportunities for value co-creation.

Along with EFS, four different groups of actors were invited to participate in the platform from its beginning (illustrated in Figure 3): 1) the managing agent MA, 2) the six single outsourced service providers, 3) various representatives from two Dutch universities specialising in facility services and 4) various outsiders, called

inspirators within the platform (i.e. consultants and employees from facility service providers without a contract-related interest in the activities of EFS and/or MA).

Insert Figure 3 about here

All of the participants worked within the platform on a voluntary basis, which means they were under no obligation to participate beyond the official contracts that providers and MA had with EFS. The following quote is an example of participants' perception of the platform, in which a representative of an outsourced service provider recognised the role of the platform in supporting the management of innovation and the sharing of knowledge.

> "The innovation platform gives me a great opportunity to work with all of Essent's facility partners to improve the facility management chain and to seek innovations. In addition to that, the meetings that take place on a regular basis give me a clear understanding of the Essent facility department objectives." Representative of outsourced service provider, April 2013

In addition, both the academics and the other outsiders stressed that they invested time in the platform because they were convinced that it provided them with useful information and perspectives, as they recognised in several occasions. The outsiders had experience in the context of facility service provision, yet they had no specific interest in working with EFS' platform because they did not have contracts with EFS itself. The following quotes show some of the perceptions on participation across the platform.

> "We started up with suppliers but we added education in the form of two Dutch universities. We are bundling our strengths to come up with new services and this can also be useful for students to get new ideas." Manager of EFS on inviting academics to join the Innovation platform, December 2012

> "We provide education and we do research [at our university]. For good education we need practical experiences, and here we are in the first row. In addition, several participants of the platform are more than happy to contribute [to our education offering] with guest lectures. (…) For working out and researching ideas and questions that arise from practice, our students and researchers are ready to help. It's a win-win situation." Representative of Dutch university on joining the platform, December 2012

> "What is positive about the platform is that it is a place to meet each other outside of the normal rush of the day, where we work together on topics everybody is facing. Each time we meet we become more and more concrete, so we really found solutions for some difficult topics. What is in it for me? Network and inspiration." Inspirator on the motivations behind contributing to the platform, April 2013

The relationship of the EFS' platform with the two Dutch universities was formalised in March 2012. Shortly afterward, EFS invited an initial group of selected representatives from MA, certain outsourced service providers and the universities to meet at one of the providers' headquarters to discuss the potential settings for

the platform. During the meeting, each stakeholder presented itself and its needs and expectations with regard to the platform, and an informal kick-off for April 2012 was decided upon. Representatives of all of the stakeholders were invited to attend the informal kick-off, thereby contributing to deciding how they would work within it. During the kick-off, the participating members defined the platform's goals and objectives along with a first structure and system to organise upcoming activities. Such activities included quarterly meetings among representatives of all of the stakeholders as well as launching a virtual platform (Yammer) to support face-to-face interactions. Quarterly meetings were designed to focus on activities that would increase cooperation between all of the parties in the facility service stakeholder network rather than controlling the interactions between stakeholders by monitoring their measurable outcome.

> "Besides the interesting discussions during the workshops, it is also great fun to work with market leaders and to better connect to each other. That's why we fully support this initiative and we are more than happy to contribute to the innovation platform." Inspirator, on the activities of the strategic layer of the platform, April 2013

The quotes from representatives of providers, academics and inspirators illustrate how EFS' recognition of the platform as holistic provider to support the co-creation of value was shared across stakeholders. Moreover, these examples unveil the processes associated with the relationship experience on the receiver side, and outline the combination of emotion, cognition and behaviour that individual receivers experienced during the emergence of the EFS' platform. The very fact that participation in the platform was voluntary required prospective members to individually feel, reflect and act upon their decision to join it, which, as Payne et al. (2007) propose, created the foundation for the encounter processes and eventually value co-creation.

In contrast, the end recipients of the facility services (i.e. Essent employees and visitors to their facilities) who benefitted from the service provision on a daily basis and were thereby enabled to carry out their core tasks and activities were not invited to join the activities of the platform. This was due to the decision to limit complexity by involving demand indirectly through the intermediary action of EFS. Originally, EFS considered inviting representatives of the receivers of facility services together with the other members of the platform, but it eventually agreed to use tools such as user surveys and focus groups to mediate between the individual needs and expectations of single receivers and the corporate requests of the organisation as a whole. Nevertheless, in December 2014, having established proper routines and acknowledging the network's ability to deal with increased complexity, the platform began considering more direct involvement, as stressed by one of EFS managers in the following quote.

> "Now it is time to also actively talk to our users to decide how we can adjust our services as well as possible to their demands. We deliberately waited before doing this. Of course we had meetings with the end users, but now we want to take an extra step to really listen to the user through a good, cooperative and inspired approach via the platform." EFS manager on the involvement of end users, December 2014

In June 2012, representatives of all of the stakeholders attended a first EFS' platform session *in plenum* (i.e. the first opportunity to generate encounter processes). During this session, all of the individual participants shared their opinions of how EFS' platform could improve user experience by coming up with innovations. For instance, EFS presented the issue of improving the experience of Essent employees and guests entering the building, and participants proposed and discussed potential ideas and concrete solutions for this. In so doing, the network acted upon the identified co-creation opportunities through planning. Following this *in plenum* session, platform activities were organised across strategic and operational layers as a first set of implementation and metrics activities. This allowed the stakeholders to increase the homogeneity of needs and expectations within each layer and to design routines that would support value co-creation and innovation. In addition, one of the main outcomes of the session was realising that if the platform's aim was to come up with new ideas for improved and innovative service provision, all of the participants needed the right motivation, attitude and skills to aid in implementing creative solutions. Achieving this was made difficult by the heterogeneity of the EFS stakeholder network, which included actors concerned with strategic decision making as well as operational staff in charge of daily service-providing operations. As the network accomplished the ideation of the platform, it completed the first set of encounter processes and led to the first value co-creation outcome: both individual receivers and the network as a whole recognised that they achieved learning and co-created value. Based on a decision made during the first platform meeting, a virtual Yammer network was launched in July 2012 to simplify communication within and across the strategic and operational layers. All members of the strategic layer were asked to join Yammer, and as of 2015, were well represented on the Yammer platform. The operational layer was invited as well, but only a few representatives entered the virtual platform, mainly out of curiosity. Yammer can be used to share information as well as to upload documenting and supporting material related to past and upcoming platform activities. At first, mainly representatives of EFS and MA posted on the virtual network, but over time, outsiders, academics and representatives of the service providers started contributing.

Overall, during the emergence of EFS' platform, stakeholder relations started developing through initiation and negotiation. Prior interactions between individual participants (including their general reputations and

institutional categories) offered the grounds for individual–organisation trust, while across each layer, the involved actors could get to know each other on a deeper level and build reciprocal respect and trust thanks to dedicated routines and activities. All parties agreed to the double commitment to contribute information and receive information in the platform in order to share knowledge and ideas, as interpersonal interactions triggered the progression from initial individual–organisation trust to individual–individual trust. Consequently, participants began to recognise the network as a trustworthy overarching organisation where they could set aside individual needs and expectations and work and co-create value collaboratively. From this moment on, the network became a unified entity and the acknowledged provider of the co-creation and relationship experience design. Within the network, individual participants started co-managing themselves, having found in the platform a safe place to empower themselves beyond the roles that they typically played in the facility service ecosystem surrounding Essent.

Expansion of EFS' innovation platform: Organising through planning and forming stakeholder relations

Over the expansion phase of the network development and since the layer separation in mid-2012, a structured organisation of identifiable and specific routines emerged, and the network made sure it was developed and adjusted over time depending on the platform's needs. Building on dedicated decision-making activities, the network associated the two layers with specific members and dedicated routines. In the quote, one EFS manager reflects on the work of the strategic layer of the platform.

> "It sounds very easy, but we bring choices and decisions back to the stakeholders in the platform. If we [i.e., EFS] make a choice and ask them [i.e., the providers] to carry it out, we get back into the transaction-based relationship. This is what we would like to get out of, because then we get into the discussion about contracts etc." EFS manager on the activities of the strategic layer of the platform, December 2014

This example illustrates that the strategic layer included representatives of the strategic decision makers of all stakeholders and demonstrates how it worked as a single, collaborative unit with a focus on 1) the overall development of the facility service provision chain and 2) specific developments in the strategic management of single facility service provision to Essent. The strategic layer routines included quarterly meetings facilitated by the managing agent and EFS; these took place at one of the facility service providers' headquarters or at an external facility. The latter was treated as a platform fieldtrip during which stakeholders learned how other organisations and networks managed facility service provision and innovation. The network then used such external knowledge to enrich the platform's related activities and decision making.

These meetings followed a systematic and recurrent agenda, which the manager of EFS suggested and the network as a whole agreed upon. After a brief introduction (and a visit to the facilities if the meeting was organised in a fieldtrip setting), any progress in the activities that originated within the previous meeting was presented and discussed. Participants then divided themselves into smaller groups to brainstorm a potential plan of action for the following months. The activities that each group proposed were discussed *in plenum*, with the collective defining the goals to be reached before the next meeting. While each meeting was typically facilitated by one of the participants, decision making was open ended and based on extensive, shared discussion within the network. The resulting plan of action typically included improvement projects to be implemented by one or more of the service providers working collaboratively (see the abstract in Table 1).

Insert Table 1 about here

Each activity constituted an encounter process that originated organisational and receiver learning and enabled participants to co-create value. On the provider side, the network operated as a whole on the strategic layer to identify co-creation opportunities, plan and organise for implementation and feedback, each time completing a cycle of co-creation and relationship experience design. Initially, the network relied on facilitation by the EFS manager or another stakeholder as more interactions and value co-creation processes took place. Over time, participants learned how to manage themselves and how to swap roles among each other depending on the situation to ensure that co-creation and relationship experience design matched with the relationship experience on the receiver side, thereby supporting the encounter processes. On the receiver side, the relationship experience of individual participants involved emotion, cognition and behaviour as stakeholders learned about each other's daily activities, discussed issues and potential plans of action and defined short-term goals.

The operational layer of the platform involved all of the operational staff members who worked in the facility service provision chain (from cleaners to caterers to receptionists to technicians). Once per month, the managing agent hosted sessions for the operational facility service provision staff, asking them to discuss their daily activities while interacting with each other. More specifically, activities for the operational layer of the platform were based on getting to know and understanding each other better so that cooperation across the staff of different facility service providers could occur more naturally, as the contract manager of FM highlighted.

> "Pro-activity between service providers is now better than before we started interacting through the Innovation platform. Providers look around more instead of just focusing on their own activities and expertise only. For example, cleaning staff also reports on defects in lightning (…). We also have a list on which we note defects and, usually at the end of the day,

> report it at the service desk. I cannot mention any provider that is currently not pro-active: where they can help each other they do it." Contract manager of MA on the activities of the operational layer of the platform, January 2014

The quote shows how, similar to the meetings of the strategic layer of the platform, there was room for the participants to share ideas that would, depending on their size and financial impact, be carried out right away or discussed during the strategic meetings and then possibly be implemented later. One of the first, apparently simple, suggestions that the operational staff made was to design an idea board containing every employee's schedule, instantly improving communication; the board had a space designated for people to leave ideas. Again, each meeting of the operational layer constituted an encounter process, after which the network took a step further in its learning and development, with value co-created by and for the platform as a whole and for each individual receiver.

The activities and decisions that originated in the strategic layer of the platform influenced and were interwoven with those of the operational layer. In the beginning of 2013, a meeting of the strategic layer included a discussion on the type of behaviour that should be sought amongst operational staff when dealing with hospitality. In the first half of 2013, through an iterative process, EFS and MA co-designed a behaviour profile tool that defined what behaviour was suitable for what type of tasks in the facility service provision chain based on Essent's company values. The values were translated into competences that were eventually translated back into types of behaviour that the operational employees of all external service providers could recognise and follow (receiver learning). Throughout the process, all parties evaluated each other's input and were involved in defining the final tool (organisational learning), an example of which is shown in Figure 4.

Insert Figure 4 about here

The separation of the strategic and operational layers allowed the network to organise and establish value co-creation activities and routines for EFS' platform that would support its development through the expansion phase. At the same time, it supported the formation of stakeholder relations, throughout which individuals transferred inter-organisational trust to the network. With increasing inter-personal interactions supported by the meetings and activities of strategic and operational layers, the behaviour of each participant was attributed more generally to the network and its role as a trusted party to guide value co-creation.

Maturity of EFS' innovation platform: Managing though developing practices and metrics for value co-creation, the institutionalisation of trust and self-empowerment

By encouraging interaction among different parties, EFS' platform reached maturity and started supporting the ideation, development and implementation of improvements and innovations to its facility service provision through the coordinated interactions between its members. Table 2 outlines a selection of platform improvement processes organised by the stakeholders who implemented them that were carried out between the first platform meeting and the end of 2014. Table 2 is based on the implementation plans proposed and evaluated during the strategic platform meetings. In other words, the stakeholders selected the improvement processes in the table. Table 2 thereby shows those platform improvement processes that were associated with value co-creation by the stakeholders themselves as offering them value-in-use.

Insert Table 2 about here

These encounter processes were shared among all participants as part of the platform's activities, usually originating during the quarterly meetings. Economic challenges that were caused, for instance, by the financial crisis and the consequent need to cut costs appeared as a major motivation behind most of the improvements, as all of the stakeholders in EFS' platform focused on increasing efficiency without reducing user satisfaction to unacceptable levels when searching and planning for co-creation opportunities. In contrast, the service providers sometimes struggled to deviate from their well-known practises in order to embrace new ones. In addition, the heterogeneity in the needs and expectations, as well as in the risk aversion, of the participants made it harder for different parties to agree on how to implement improvement processes. This caused setbacks in the stakeholders' relation development, going back to the negotiation phase each time. Nonetheless, as time passed and more meetings took place, EFS' platform increasingly supported cooperation among stakeholders by creating a climate of reciprocal understanding.

> "That's one of the important things to me: sharing information with each other. And letting loose of the boundaries around every supplier. (…) I also take the things I hear and learn at the platform back to my organisation. I speak to my manager about what is going on at the platform. The good ideas I take to my other clients, so it is not completely just for Essent, but also at other clients, not with the same suppliers, not with the same people." Representative of catering service provider on the activities of the strategic layer of the platform, December 2014

> "Since we put out actions in the Innovation platform, I mostly noticed that there is a bigger cooperation. This started with small steps, like exchanging phone numbers amongst staff and discussing who has which responsibilities. This now changed into a proper cooperation, in which they feel like a team and are aware of each other's activities. (…) So now

> vending, cleaning and maintenance are using forms, with which they walk around to check for defects that they can store in the facility service Information System. This way we make sure we are there for the end user and take care that there is not more defects." Operational manager of MA on the activities of the operational layers of the platform, December 2014

The quotes demonstrate how more personal interactions allowed for a further exchange of trust between individuals, which then allowed the stakeholder relations to form once again and eventually led to the institutionalisation of trust. This allowed the network to create and exploit value co-creation opportunities beyond the boundaries of the network itself, as actors who did not previously talk to one another felt self-empowered to collaborate and bring new knowledge and experience back to their own organisations.

Despite a general positive attitude toward the platform, during 2013, all of the parties involved articulated the need to measure the outcomes of the platform's activities. In January 2014, EFS distributed an email survey to all of the participants. The results were presented and discussed in May 2014 during a meeting that involved both the strategic and the operational layers. Originally, the results were meant to establish a foundation for identifying concrete targets for all stakeholders; this should have been the main topic of discussion during this particular meeting. Interestingly enough, however, participants agreed that it was not targets that were needed, but rather an overall platform goal that was influenced by all parties and evaluated holistically rather than measured individually across stakeholders. In addition, the strategic layer presented the behaviour profile tool to the operational staff, explaining how its implementation would influence upcoming daily operations. Not only was the operational staff now expected to work as one large team, but it was offered dedicated training to match with the new services and processes defined during the previous meetings of the strategic layer. The platform goal was officially launched in September 2014, and the dedicated operational layer training began in January 2015. This is a particularly interesting example of encounter process, which shows that the network has reached maturity. In fact, the co-creation opportunity in this case concerns building an environment for the platform ecosystem: the encounter process is not related in any way to value that could benefit individual participants directly as other processes did, but to value that they could co-create for the network itself. In the meantime, the EFS manager who ideated the platform and motivated the stakeholder network throughout its evolution over time left to join a different business area of Essent that was unrelated to facility service provision. Despite this critical change, the platform kept functioning, supported by other driving figures. More specifically, several operational layer meetings supported the implementation of plans across daily service provision, and new ideas were generated during strategic layer meetings.

Discussion

This study investigated how a network of stakeholders, collaborating to openly manage innovation, co-creates value over time. Previous work on value co-creation described value co-creation processes as a joint act of direct interaction between providers and receivers (e.g. Baumann & Le Meunier-FitzHugh, 2014; Lambert & Enz, 2012) or between stakeholders in a network (e.g. Giannopoulou et al., 2011; Kazadi et al., 2015; Lazzarotti & Manzini, 2009). Thanks to such interaction, value is socially created via the definition of shared purpose, the identification of gate keepers and the design of a support infrastructure (Diffley & McCole, 2015; Hansen, 2017; Pera et al., 2016; Prior & Marcos-Cuevas, 2016; Singaraju, Nguyen, Niininen, & Sullivan-Mort, 2016).

Through an in-depth and longitudinal case study of EFS' innovation platform, this study contributes to the understanding of value co-creation within a network by studying it from the perspective of the network itself and presenting it as a phenomenon that goes beyond the boundaries of pre-determined *ad hoc* projects. This study investigated planned and emergent innovation processes that take place throughout the development of a platform for the management of open innovation. The findings indicate that value co-creation within a network of stakeholders does not simply entail single encounter processes between providers and receivers, even if tied into a strategy (Lambert & Enz, 2012; Lenka et al., 2017; Payne et al., 2007; Wong et al., 2016). Rather, value co-creation consists of a combination of activities and progressions that allow the network and its individual participants to co-create through progressive learning and stakeholder relation development (Carroll & Helfert, 2015; Fu et al., 2017; Mačiuliene & Skaržauskiene, 2016; Pera et al., 2016). Furthermore, this study contributes to existing literature by arguing for an adaptable structure, stakeholder relation development and self-empowerment as enablers of progressive value co-creation in a network. EFS' platform case study revealed that a network of stakeholders collaborating to openly manage innovation co-creates value over time by 1) offering an adaptable structure for the network to organise innovation activities and establish support routines, 2) facilitating interactions to support stakeholder relation development and 3) allowing participants to achieve self-empowerment.

Firstly, despite EFS' intention to get its stakeholders to cooperate and co-create value that would benefit all parties, it was not until the platform was launched that the network actually began interacting in a profitable manner. Adopting a structure and set of routines that all actors agreed upon uncovered the needs, expectations and backgrounds of the different stakeholders. This reduced complexity in the relationships across the network,

as the different parties learned how to interact with each other over time (Frow et al., 2014; Mačiuliene & Skaržauskiene, 2016; Pera et al., 2016). At the same time, the participatory and open-ended character of the innovation activities and support routines of the platform allowed the network to keep the structure flexible. In doing so, the network could easily adapt the structure of the platform when circumstances in the form of environmental changes emerged. The platform thus developed over time (Waligo et al., 2014) through a merged interaction process in which stakeholders co-created value in a joint sphere by increasing the breadth and depth of its interactions (Hewing, 2013; Jääskeläinen, Kortelainen, & Hinkkanen, 2013; Lenka et al., 2017).

Secondly, through the organisation of innovation activities, the network also ensured that stakeholders would interact on a regular basis by establishing opportunities for stakeholders to meet, share knowledge and cooperate. While these activities were aimed at, and often resulted in, value co-creation, the recurrent interactions also created the ground on which to build up and eventually institutionalise inter-organisational trust. As in dyadic relations between a provider and its end users, in the network of EFS' platform, mutual commitment, common goals, dialogue and shared interested proved themselves to be critical throughout value co-creation in each encounter process organised by the network (Baumann & Le Meunier-FitzHugh, 2014; Kohtamäki & Partanen, 2016). However, role stressors and coopetitive tensions sometimes led to a lack of transparency, information asymmetry, power games and opportunistic behaviour. In these situations, recognising the potential downsides and acting upon them through openness actually supported fruitful interactions (Chowdhury et al., 2016; Kazadi et al., 2015). Over time, stakeholders opened up to each other and developed close relationships thanks to the development of relational capabilities (Mostafa, 2016; Ngugi et al., 2010; Pérez & Cambra-Fierro, 2015; Ramaswamy & Ozcan, 2016). Despite some setbacks caused by environmental changes and behavioural uncertainty (Talay & Akdeniz, 2014), relational capabilities supported stakeholder relations development and eventually resulted in the institutionalisation of inter-organisational trust (Schilke & Cook, 2013).

Finally, while EFS facilitated the emergence of the platform by adopting the role of network orchestrator, its contribution evolved over time. EFS managers went from being a critical presence (i.e. the platform simply would not function without them) to being supportive figures (Fu et al., 2017) as the stakeholders freed themselves from their traditional roles and relationships and started co-managing the network. Eventually, other actors such as representatives of MA or even external inspirators showed themselves to be both driving figures and motivators as well as volunteered to take over some of the managing functions (e.g. running sessions,

offering dedicated training, driving virtual interactions on Yammer). This happened alongside the development of stakeholder relations and inter-organisational trust (Schilke & Cook, 2013), which unrolled over time as the network as a whole initiated and implemented value co-creation activities (Carroll & Helfert, 2015; Kohtamäki et al., 2013; Murthy et al., 2016). This confirms the role of individual leadership characteristics among the network's members for stakeholder value co-creation (Mačiuliene & Skaržauskiene, 2016; Pera et al., 2016) as well as the part played by network orchestrators in building the foundations for value co-creation (Engelen et al., 2017; Nilsen & Gausdal, 2017; Santos-Vijande et al., 2016). However, it challenges the notion that it is the network owner who must somehow lead individual value co-creation processes and overall progression throughout the emergence, expansion and maturity of a stakeholder value co-creation network (Fu et al., 2017). It also raises questions about the dependence of value co-creation on the leadership quality and stakeholder involvement capacity of a network leader, be it the network owner or another stakeholder (Waligo et al., 2014). Therefore, this study contributes to existing literature as it emphasises that the self-empowerment of stakeholders, as allowed for by the emergence, development and institutionalisation of inter-organisational trust through adaptable structure and facilitation of interactions, constitutes a critical enabler for value co-creation within a network.

Conclusion

This paper has investigated how a network of stakeholders collaborating to manage innovation openly co-creates value over time. The results from the case study, analysed through a process approach built upon existing literature, contributes to our understanding of value co-creation by suggesting that stakeholder value co-creation goes beyond isolated *ad hoc* practises aimed at increasing organisational performance at a specific point in time. In fact, this work indicates that stakeholder value co-creation entails the combination of single value co-creation activities and overarching network progressions that allow for learning and inter-organisational trust among stakeholders. Altogether, the findings of the present study support the existing literature stressing the importance of understanding stakeholders' needs and expectations, evaluating the potential of different value co-creation mechanisms and managing relationships constructively and longitudinally. This paper's contributions lie in taking the perspective of the network as a whole to argue that a network of stakeholders collaborating to openly innovate openly co-creates value over time through an adaptable structure, stakeholder relation development and self-empowerment. This implies that there might be

much more to value co-creation than the 'pursuit of mutually beneficial relationships between marketers and customers by empowering customers to be creative collaborators in the production process' (Bonsu & Darmody, 2008, p. 356). All of the stakeholders co-managed themselves by creating and co-developing EFS' platform, learning from and motivating each other across the network toward value co-creation in order to achieve innovation. Although the present study does not include enough data to extract results on this topic, it identified two instances in which value co-creation went beyond the original network. MA created and launched two copies of EFS' platform in the stakeholder networks of other facility service customers, aiming to re-create the same value co-creation progression by applying the learning on adaptable structure, relational capabilities and self-empowerment.

Practitioners often interpret value co-creation as a set of methodologies for stakeholder interaction that, thanks to social and technological change, enable individuals, groups and organisations to connect, collaborate, solve problems and create new value together (Keegan & Brown, 2009; Keegan, 2009). In contrast, the findings from this study suggest that stakeholder interactions increase in reach and richness as the stakeholders in the network get to know each other, develop inter-organisational trust and learn how to best uncover the needs and expectations of all parties as well as how to balance these via optimal solutions. To achieve this, the original network leader should identify and actively involve potential stakeholders from the earliest steps of the platform development. In other words, stakeholders should be invited to help design the platform in order to contribute to its characteristics, values, vision and mission. At the same time, diverse stakeholders can have different expectations and attitudes toward the platform; the network leader should encourage stakeholders to be transparent about these differences, as they can be used to create sub-groups of actors. Eventually, the network can select, apply and modify tools and methods to facilitate the interaction and contribution of stakeholders depending on the circumstances and the platform's development over time.

Overall, this work has underlined the need for a process investigation of stakeholder value co-creation from the perspective of the network as a whole. Many previous studies have looked at only one perspective within such open innovation and value co-creation networks. This paper illustrated the value of a holistic investigation, which clarified that the role of network orchestrators is not fixed over time, but that it changes thanks to the self-empowerment of stakeholders. The characterisation of longitudinal stakeholder value co-creation proposed in this paper should be refined, validated and tested using other cases and approaches, including cross-sectional and variance studies. Through the application of scientific methods of investigation to these phenomena, further

progress can be made in unlocking and analysing the complexity of stakeholder value co-creation, as the focus on a single case study limits the generalisability and external validity of the results. Further, Author 2's involvement in developing the network investigated in this study brought both benefits and limitations. While it offered an excellent opportunity to collect extensive and longitudinal data on the case study, it created potential biases in data interpretation and results extraction. To constrain potential biases, key informants who could offer different perspectives on the investigated processes were interviewed. Author 1 analysed the data independently before discussing it with the Author 2 in order to limit the subjectivity of the interpretation.

Future research should be directed at refining the understanding of stakeholder value co-creation from the perspective of the network and at identifying further enablers of related processes. The present study raised two additional issues that might be worth investigating. Firstly, the emergence of two copies of the platform studied here suggests that enablers of stakeholder co-creation in one network might extend their influence beyond the original context. Secondly, this study was completed a few months after Author 2, who was involved in launching the platform, left his position – consequently, no further interviews/observations were conducted with the participants of the platform. This is certainly a limitation of the study, and further research should look at the consequences of this change on the platform and at the evolution of the copies. As of the beginning of 2015, it appeared that the platform had developed the dynamic capability to continue co-creating value without one of its key drivers and motivators; however, the time since this assessment should be included in future studies.

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Tables

Table 1

Abstract of action plan from strategic layer meeting

N.	Action items	Responsible actor	Deadline
5.	The caterer analysed the skills and capabilities of the catering employees in relation to their behaviour profiles. Based on this analysis, the caterer created 'Seven Essentials of Our Work' based on hospitality. This will be the basis for dedicated training in awareness that the caterer will provide in December. Two new employees with capabilities that fit the behaviour profile have been hired. These new employees will consult other register systems and look for a change in catering area design. The contract manager expects the first sign of change to occur at the end of the year. A team day is planned for 7 October 2013; here, the caterer and the MA will look for ways to improve the service provision at Essent headquarters.	Confidential	15 November 2013
6.	The hospitality supplier did hospitality training with the staff; this training will be updated every year from now on. The supplier also does on-the-job coaching. The supplier conducted a hospitality scan via a mystery guest visit, the results of which will be shared with the platform. The hospitality supplier offered to provide other suppliers with hospitality training if they were interested. Also, the supplier is developing a hospitality scan enabling the user to scan the whole building (including all services); the results of scan will be shared with the platform. The hospitality supplier explained how scanning the number of license plates waiting to enter the parking garage could help to speed up the hospitality process. In addition, the supplier is looking for ways to accelerate the sign-in process for visitors. Essent and the MA are already looking into a technical solution to sign in visitors via SMS.	Confidential	15 November 2013
7.	The maintenance partner is mostly working on translating decisions made in the strategic platform to the operational platform. There is especially a lot of attention for the operational lead, as the lead has been chosen to serve as an ambassador for the platform. The hospitality supplier offered to help the maintenance supplier.	Confidential	15 November 2013

Table 2

Selection of performed improvements carried out through EFS' innovation platform activities (organised by implementing stakeholders)

Stakeholder		Improvement
EFS	1	Behaviour profile for facility service provision chain was developed
	2	A climbing wall was placed in the work environment to promote healthy living and sports
	3	Red Bull employees were engaged to offer Essent employees more (liquid) energy
	4	Actresses were hired to (positively) influence the behaviour of end users and make them feel responsible for their work environment
	5	QR codes (placed on coffee machines, bathrooms and meeting rooms) were created to improve user experience in logging complaints
	6	A facility service app for smartphones was created and implemented to easily access the ticketing system and make orders for facility services
	7	The office received a 'winning workplace' competition award assigned by commercial real estate service provider JLL
	8	Students were hired to support the EFS platform's communication and other basic activities
MA	1	Cooperation on the operational level was created among all service providers
	2	An idea board was created and placed in area where operational staff works in order to collect ideas from frontline employees
	3	A dinner for all of the operational layer participants was organised to stimulate awareness of each other's tasks and responsibilities and to create respect and trust
	4	A 'WE CANTEEN' initiative was organised together with the catering service provider to connect frontline employees among each other
	5	A 'Share and Meet' initiative was launched to encourage service providers to meet with other clients of the managing agent
Cleaning provider	1	In team meetings, the topics of end user experience, user behaviour and quality were added to the agenda
	2	Active participation in meetings with catering, security and greening service providers was started
	3	A daily list of calls regarding disruptions in service was provided by operational employees to the managing agent
	4	A pilot programme to increase cleaning frequency was launched
	5	Extra instructions were distributed to cleaning staff on how to clean bathrooms
	6	A professional agency was consulted to include smell management in cleaning services to improve end user experience
	7	iPhones were distributed to key users to support better communication with other facility service providers and staff
Catering provider	1	General actions on how to improve basic catering services were discussed among the team and then implemented
	2	Employee satisfaction research was performed on the catering organisation
	3	Behaviour profiles were tested on all staff members working for Essent accounts
	4	Staff's individual strengths and weaknesses were identified in order to improve catering activities
	5	Job rotations for the catering staff were implemented
	6	New guidelines for catering staff ('Seven Essentials of Our Work') were developed and distributed
	7	A 'Quality on Location' programme was launched to focus on customer experience
Building maintenance provider	1	Better cooperation between different maintenance service providers was achieved through operational meetings

	2	Communication on operational tasks was aligned across providers
	3	Employees were encouraged to think beyond the boundaries of their job description (e.g. maintenance staff now also empty garbage bins if need is detected)
	4	To improve communication, a smartphone with related apps that facilitates feedback was distributed to staff
Car lease provider	1	Closer connections with clients were achieved by making sure car lease staff could be found on site at Essent more regularly
	2	A more detailed guide for supporting end users when selecting cars has been developed and distributed to car lease staff
Hospitality provider	1	Additional hospitality training was introduced to the hospitality team
	2	On-the-job coaching was introduced
	3	Staff were instructed to proactively inform visitors of developments outside of the building (e.g. road work and traffic)
	4	A booklet was designed with updated train schedule information for visitors and employees
	5	Staff were instructed to distribute fruit to visitors for their journey home
	6	A hospitality scan was performed through a ‘mystery guest’ setting; the results were shared with the whole platform
	7	Staff were instructed to help caterers when offering nice treats to improve end user perception of the Essent workplace
	8	Umbrella covers were distributed to employees and visitors in case of rain
	9	A ‘face book’ of Essent employees was distributed to hospitality staff to help them recognise and greet end users

Figure captions

Figure 1a

Timeline of EFS Innovation platform development (2010 to 2012).

Figure 1b

Timeline of EFS Innovation platform development (2012 to April 2014).

Figure 1c

Timeline of EFS Innovation platform development (May 2014 to 2015).

Figure 2

EFS stakeholder network (Adapted from EFS representation).

Figure 3

Visualization of EFS Innovation platform (Adapted from EFS representation).

Figure 4

Example of behaviour profile tool applied to Essent (Source: EFS).